

SUPPLEMENTAL AMENDMENT TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

1-111. (Cancelled)

112. (Currently Amended) An isolated nucleic acid comprising:

- (a) a nucleotide sequence encoding a CatSper1 protein comprising [[of]] SEQ ID NO: 2; or
- (b) a nucleotide sequence complementary to the nucleotide sequence of (a).

113. (Currently Amended) The isolated nucleic acid of claim 112 ~~claim 1~~, wherein said nucleotide sequence encoding a CatSper1 protein comprises SEQ ID NO: 1.

114. (Cancelled)

115. (Currently Amended) The isolated nucleic acid of any one of claims 112-113 ~~[[112-114]]~~, further comprising:

a heterologous regulatory region operably joined to said sequence.

116. (Currently Amended) A kit for detecting a CatSper1 nucleic acid comprising a container comprising:

an isolated nucleic acid of any one of claims 112-113 ~~[[112-114]]~~; and
a means for detecting said isolated nucleic acid.

117. (Previously Presented) The kit of claim 116, wherein
said means for detecting said isolated nucleic acid comprises a detectable label bound thereto.

118. (Previously Presented) The kit of claim 116, wherein
said means for detecting said isolated nucleic acid comprises a labeled secondary nucleic acid which specifically hybridizes to said isolated nucleic acid.
119. (Currently Amended) A vector comprising an isolated nucleic acid of any one of claims 112-113 ~~[[112-114]]~~.
120. (Previously Presented) A vector comprising an isolated nucleic acid of claim 115.
121. (Currently Amended) An expression ~~[[A]]~~ vector comprising a genetic construct capable of expressing a nucleic acid of any one of claims 112-113 ~~[[112-114]]~~.
122. (Previously Presented) The vector of claim 121, wherein said nucleic acid is operably joined to a heterologous regulatory region.
123. (Currently Amended) The vector of claim 121, wherein said nucleic acid is operably joined to heterologous coding sequences ~~to form a fusion vector~~.
124. (Currently Amended) A vector comprising an isolated nucleic acid of any one of claims 112-113 ~~[[112-114]]~~ operably joined to a reporter gene.
125. (Currently Amended) An isolated cell transformed with ~~[[a]]~~ the nucleic acid of any one of claims 112-113 ~~[[112-114]]~~.
126. (Currently Amended) An isolated cell transformed with ~~[[a]]~~ the nucleic acid of claim 115.
127. (Currently Amended) An isolated cell transformed with ~~[[a]]~~ the a vector of claim 119.
128. (Currently Amended) An isolated cell transformed with ~~[[a]]~~ the vector of claim 120.

129. (Currently Amended) An isolated cell transformed with [[a]] the vector of claim 121.
130. (Currently Amended) An isolated cell transformed with [[a]] the vector of claim 122.
131. (Currently Amended) An isolated cell transformed with [[a]] the vector of claim 123.
132. (Currently Amended) An isolated cell transformed with [[a]] the vector of claim 124.
133. (Previously Presented) The isolated cell of claim 125, wherein
said cell is selected from the group consisting of bacterial cells, yeast cells, insect cells,
nematode cells, amphibian cells, rodent cells, and human cells.
134. (Previously Presented) The isolated cell of claim 125, wherein
said cell is selected from the group consisting of mammalian somatic cells, fetal cells,
embryonic stem cells, zygotes, gametes, germ line cells and transgenic animal cells.
135. (New) An isolated nucleic acid comprising:
(a) a nucleotide sequence encoding a CatSper1 protein comprising SEQ ID NO: 2; or
(b) the nucleotide sequence complementary to the nucleotide sequence of (a).
136. (New) An isolated nucleic acid comprising:
(a) a nucleotide sequence encoding a CatSper1 protein comprising SEQ ID NO: 2; or
(b) a nucleotide sequence comprising the complement of the nucleotide sequence of (a).